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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,791	03/24/2004	Felipe O. Simoes	555255012725	4249

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EXAMINER

HUYNH, NAM TRUNG

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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06/15/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/807,791

Applicant(s)

SIMOES ET AL.

Examiner

Nam Huynh

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30, 32 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30, 32, and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to amendment filed on 3/8/2007. Of the previously presented claims 1-34, no amendments were made and claims 31 and 34 have been cancelled.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-21, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao (US 6,774,603) in view of Wu (US 5,744,934).

Regarding claims 1, 5, 7, and 12-15, Liao discloses a multi-function charger (charging unit) that comprises the following components:

- A means to convert AC power to DC power (power converter) (column 3, lines 48-67).

- An input end (electrical contact) (figure 2, item 13) located on a circuit board for receiving an input voltage.
- An output cord (figure 4, item 15) and plug (figure 4, item 27) (output assembly) for charging the battery of a mobile device.
- An adapter plug (plug) (figure 8, item 66) and input cord (power cord) (figure 8, item 65) that permits the charging unit to be positioned at a remote location from the outlet.

Liao discloses a plug (figure 8, item 64) that is detachable from an input end (figure 8, item 13), which may also render the input assembly because of its detachability. However, Liao does not explicitly disclose the claimed structure of the charging unit and input assembly. More specifically, the limitations regarding a base wall with a receptacle defined within and an adapter with an electrical contact having a front face for removable attachment with the electrical contact of the receptacle where the first input assembly face faces the receptacle. Wu discloses a power supply device (charging unit) comprising a rectangular top chamber (figure 1, item 11) (receptacle) that includes terminals (figure 1, items 11, 13) (charging unit electrical contacts) for receiving contacts (adapter electrical contacts) of an AC plug (figure 3, item 42) or a DC plug (figure 4, item 53) (adapter). As can be seen in the figures 3 and 4, the plug faces the top chamber. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the input end of Liao and allow it to be detachable/interchangeable from the multi-function charger in a manner taught by Wu, in order to allow a user to alternatively use different power plug interfaces to fit different

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specifications of power supply outlets. The addition of a top chamber/plug structure also provides a more secure means of attachment to the multi-function charger.

Furthermore, in the combination of both inventions, the storing of power for independent use is not taught in the detachable portions.

Regarding claim 2, the plug of Wu is intended to allow the power supply device to be configured to mate with an electrical outlet and is positioned adjacent to the outlet (figures 3 and 4).

Regarding claims 3, 4, and 32, Liao shows a USB connector (figure 2, item 31) and a cord (figure 2, item 30).

Regarding claim 6, Liao shows a mounting chamber (figure 2, item 28) (docking station).

Regarding claims 8-11, 17, 18, and 21, Wu shows a latching mechanism to latch the plug into the chamber comprising a coupling groove (figure 1, item 44) (recess) on the plug, a tongue (figure 1, item 111) (arm) in the chamber, and a stop plate (figure 1, item 21) (release mechanism) for releasing the plug.

Regarding claim 16, the limitations are rejected as applied to claims 1 and 2.

Regarding claim 19, Wu shows in figure 4, a USB connector (item 31) and an output assembly (items 15, 27) for charging an electronic device at a location remote from the charging unit.

Regarding claim 20, the limitations are rejected as applied to claims 1 and 8. Additionally, the combination of Liao and Wu discloses the plug of Wu detachable from the multi-function charger of Liao. Although in both embodiments of Wu, a connector

for a wall socket and car socket (figures 3 and 4) is shown on the plug to interface directly to a power source, it is further obvious to one of ordinary skill in the art that the combination may further be modified to allow the plug to include an input end to receive a connector attached to a plug, which is taught by Liao. This configuration would allow the plug to form a "rear face" of the chamber and form a wall of the multi-function charger.

Regarding claim 33, it is further obvious to one of ordinary skill in the art that any USB compatible device may be connected to the USB connector of Liao.

4. Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao (US 6,774,603) in view of Wu (US 5,744,934) as applied to claim 20 above, and further in view of McKee et al. (US 4,893,351).

Regarding claim 22, the combination of Liao and Wu discloses the limitations set forth in claim 20, but does not explicitly disclose that the locker (latching mechanism) comprises a pair of spring clips configured to engage a post defined in a receptacle. McKee et al. discloses a communication receiver with a latching receptacle and a connector cable with a mating plug (column 2, lines 30-39). In the scope of the invention, two spring members (spring clips) (figure 11, items 86, 88) are used to wrap around a mating plug (post) (figure 11, item 54). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the latching mechanism of the combination of Liao and Wu, to include the locking configuration of McKee et al., in order to securely lock the charging unit to the charging housing and allow the charging unit to be quickly removed when necessary.

Regarding claim 23, McKee et al. shows guide grooves (recess) (figure 9, item 58) in which the spring members latch on the mating plug.

Regarding claim 24, McKee et al. discloses a lever arm (figure 11, item 51) that when pushed in a downward direction or "plunging" direction, spreads the spring members apart which can be seen in figure 12.

Regarding claim 25, Wu discloses a coupling groove (figure 1, item 44) for guiding the

5. Claims 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao (US 6,774,603) in view of Wu (US 5,744,934) as applied to claim 20 above, and further in view of Wei et al. (US 6,371,535).

Regarding claim 26, the combination of Liao and Wu discloses the limitations set forth in claim 20 and the use of guide bars (figure 8, item 142a), but does not explicitly disclose detents that are used to engage spring biased ball bearings. Wei et al. discloses an easily releasable locking device for detachably securing a battery pack to a portable battery-powered apparatus (title). In the scope of the invention, spring loaded latching members (figure 3, items 23, 25) are configured to lock into detents of the engaging portion (figure 3, item 111). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the latching mechanism of the combination of Liao and Wu, to include the latching/locking configuration taught by Wei et al., in order to allow the charging unit to be easily attached and removed from the charging housing.

Regarding claim 27, although none of the cited references explicitly discloses an L shaped cross-section, it would have been further obvious to one of ordinary skill in the art to design the shape of the guide bars or structure in order to meet specification and design criteria.

Regarding claims 28-30, Wei et al. teaches the use of a release mechanism (column 3, lines 44-57).

Response to Arguments

4. Applicant's arguments filed 3/8/2007 have been fully considered but they are not persuasive.

Applicant asserts that if Liao and Wu were combined, the combined teachings would not allow the Liao device to be positioned remotely from the electrical contact. However, the Examiner respectfully disagrees and asserts that the combination of Liao and Wu is the charger of Liao, modified with the chamber/plug structure taught by Wu. More specifically, the input end (figure 2, item 13) of Liao is modified to be a chamber with contacts (figure 1, item 11) as taught by Wu. Furthermore, the plug of Liao (figure 8, item 64) is modified as the plug of Wu (figure 1, item 4) in order for the plug to be inserted into the chamber. The modified plug is still attached to the power cord (figure 8, item 65) of Liao, which would allow the charger to be placed at a remote location. Wu teaches that the plug comprises contacts designed to be inserted into a wall outlet (figure 1, item 41), but the Examiner does not rely on this teaching since it is already taught by Liao as seen in the illustration of the adapter plug (figure 8, item 66).

Therefore, the combination of Liao and Wu does teach providing a remote location for the charging unit relative to the wall outlet.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam Huynh whose telephone number is 571-272-5970. The examiner can normally be reached on 8 a.m.-5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NTH
5/29/07


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SUPERVISORY PATENT EXAMINER